IMPLEMENTATION OF mycaLC

```java
import java.awt.*;

import java.awt.event.*;

class MyCalc extends WindowAdapter implements ActionListener{
  Frame f;
Label l1;
Button b1,b2,b3,b4,b5,b6,b7,b8,b9,b0;
Button badd,bsub,bmult,bdiv,bmod,bcalc,bclr,bpts,bneg,bback;
double xd;
double num1,num2,check;


MyCalc(){
  f= new Frame("MY CALCULATOR");
// INSTANTIATING COMPONENETS
l1=new Label();
l1.setBackground(Color.LIGHT_GRAY);
l1.setBounds(50,50,260,60);



b1=new Button("1");
  b1.setBounds(50,340,50,50);
b2=new Button("2");
  b2.setBounds(120,340,50,50);
b3=new Button("3");
  b3.setBounds(190,340,50,50);
b4=new Button("4");
  b4.setBounds(50,270,50,50);
b5=new Button("5");
  b5.setBounds(120,270,50,50);
b6=new Button("6");
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   b6.setBounds(190,270,50,50);
b7=new Button("7");
   b7.setBounds(50,200,50,50);
b8=new Button("8");
   b8.setBounds(120,200,50,50);
b9=new Button("9");
   b9.setBounds(190,200,50,50);
b0=new Button("0");
   b0.setBounds(120,410,50,50);
bneg=new Button("+/-");
   bneg.setBounds(50,410,50,50);
bpts=new Button(".");
   bpts.setBounds(190,410,50,50);
bback=new Button("back");
 bback.setBounds(120,130,50,50);


badd=new Button("+");
   badd.setBounds(260,340,50,50);
bsub=new Button("-");
   bsub.setBounds(260,270,50,50);
bmult=new Button("*");
   bmult.setBounds(260,200,50,50);
bdiv=new Button("/");
   bdiv.setBounds(260,130,50,50);
bmod=new Button("%");
   bmod.setBounds(190,130,50,50);
bcalc=new Button("=");
   bcalc.setBounds(245,410,65,50);
bclr=new Button("CE");
   bclr.setBounds(50,130,65,50);
```

```java
b1.addActionListener(this);

b2.addActionListener(this);

b3.addActionListener(this);

b4.addActionListener(this);

b5.addActionListener(this);

b6.addActionListener(this);

b7.addActionListener(this);

b8.addActionListener(this);

b9.addActionListener(this);

b0.addActionListener(this);


bpts.addActionListener(this);

bneg.addActionListener(this);

bback.addActionListener(this);


badd.addActionListener(this);

bsub.addActionListener(this);

bmult.addActionListener(this);

bdiv.addActionListener(this);

bmod.addActionListener(this);

bcalc.addActionListener(this);

bclr.addActionListener(this);


f.addWindowListener(this);
//ADDING TO FRAME
f.add(l1);

f.add(b1); f.add(b2); f.add(b3); f.add(b4); f.add(b5);f.add(b6); f.add(b7);
f.add(b8);f.add(b9);f.add(b0);


f.add(badd); f.add(bsub); f.add(bmod); f.add(bmult); f.add(bdiv); f.add(bmod);f.add(bcalc);
```

```java
f.add(bclr); f.add(bpts);f.add(bneg); f.add(bback);

f.setSize(360,500);

f.setLayout(null);

f.setVisible(true);

}
            //FOR CLOSING THE WINDOW
public void windowClosing(WindowEvent e) {

 f.dispose();

}

public void actionPerformed(ActionEvent e){

 String z,zt;

                //NUMBER BUTTON
if(e.getSource()==b1){

 zt=l1.getText();

  z=zt+"1";

  l1.setText(z);

}
if(e.getSource()==b2){

zt=l1.getText();

z=zt+"2";

l1.setText(z);

}
if(e.getSource()==b3){

 zt=l1.getText();

 z=zt+"3";

 l1.setText(z);

}
if(e.getSource()==b4){
```

```java
 zt=l1.getText();

 z=zt+"4";

 l1.setText(z);

}

if(e.getSource()==b5){

 zt=l1.getText();

 z=zt+"5";

 l1.setText(z);

}

if(e.getSource()==b6){

 zt=l1.getText();

 z=zt+"6";

 l1.setText(z);

}

if(e.getSource()==b7){

 zt=l1.getText();

 z=zt+"7";

 l1.setText(z);

}

if(e.getSource()==b8){

 zt=l1.getText();

 z=zt+"8";

 l1.setText(z);

}

if(e.getSource()==b9){

 zt=l1.getText();

 z=zt+"9";

 l1.setText(z);

}

if(e.getSource()==b0){

 zt=l1.getText();
```

```java
   z=zt+"0";

   l1.setText(z);

}


if(e.getSource()==bpts){  //ADD DECIMAL PTS

   zt=l1.getText();

   z=zt+".";

   l1.setText(z);

}

if(e.getSource()==bneg){ //FOR NEGATIVE

   zt=l1.getText();

   z="-"+zt;

   l1.setText(z);

}


if(e.getSource()==bback){  // FOR  BACKSPACE

   zt=l1.getText();

   try{

     z=zt.substring(0, zt.length()-1);

     }catch(StringIndexOutOfBoundsException f){return;}

   l1.setText(z);

}

            //AIRTHMETIC BUTTON

if(e.getSource()==badd){                //FOR ADDITION

   try{

     num1=Double.parseDouble(l1.getText());

     }catch(NumberFormatException f){

      l1.setText("Invalid Format");

      return;

     }

   z="";
```

```java
  l1.setText(z);

  check=1;

}

if(e.getSource()==bsub){                //FOR SUBTRACTION

 try{

  num1=Double.parseDouble(l1.getText());

  }catch(NumberFormatException f){

   l1.setText("Invalid Format");

   return;

  }

 z="";

 l1.setText(z);

 check=2;

}

if(e.getSource()==bmult){               //FOR MULTIPLICATION

 try{

  num1=Double.parseDouble(l1.getText());

  }catch(NumberFormatException f){

   l1.setText("Invalid Format");

   return;

  }

 z="";

 l1.setText(z);

 check=3;

}

if(e.getSource()==bdiv){                //FOR DIVISION

 try{

  num1=Double.parseDouble(l1.getText());

  }catch(NumberFormatException f){

   l1.setText("Invalid Format");

   return;
```

```java
    }
   z="";
   l1.setText(z);
   check=4;
  }
  if(e.getSource()==bmod){              //FOR MOD/REMAINDER
   try{
     num1=Double.parseDouble(l1.getText());
     }catch(NumberFormatException f){
      l1.setText("Invalid Format");
      return;
     }
   z="";
   l1.setText(z);
   check=5;
  }
                //RESULT BUTTON
  if(e.getSource()==bcalc){
   try{
     num2=Double.parseDouble(l1.getText());
     }catch(Exception f){
      l1.setText("ENTER NUMBER FIRST ");
      return;
     }
   if(check==1)
     xd =num1+num2;
   if(check==2)
     xd =num1-num2;
   if(check==3)
     xd =num1*num2;
   if(check==4)
```

```java
    xd =num1/num2;
  if(check==5)
    xd =num1%num2;
  l1.setText(String.valueOf(xd));
}
                //FOR CLEARING THE LABEL and Memory
if(e.getSource()==bclr){
  num1=0;
  num2=0;
  check=0;
  xd=0;
   z="";
  l1.setText(z);
  }


}
//MAIN METHOD where objects of MyCalc is instantaiated
 public static void main(String args[]){
     new MyCalc();
  }
}
```